

REMARKS

To comply with 35 U.S.C. 119(b), Applicant has filed, under separate cover, a certified copy of the Canadian Patent Application Serial No. 2,329,098 on which the right of priority is claimed.

The Examiner stated that the abstract should be in narrative form within the range of 50 to 150 words and the language should be clear and concise.

Applicant submits a new abstract page for the corresponding abstract page. No new matter has been introduced by way of the amendment.

Applicant has amended claim 1 to clarify that an optical cable is connected to a multi-service platform (MSP) at one end and is connected to a connector at the other end; the MSP has a first controller; the connector has a cross-connect and a second controller; an Operations, Administration, Maintenance and Provisioning (OAM&P) subsystem is connected to a provisioning data path through the connector; the first controller signals a source identity to the OAM&P subsystem over the provisioning data path; and the second controller signals a destination identity to the OAM&P subsystem from the cross-connect. Applicant has further amended claim 1 to delete ":" after "Administration". Claim 5 has been amended to replace "a means is provided to signal" with "said first controller signals".

Applicant has amended claim 6 to clarify that an optical cable is plugged in to a connector having a cross-connect, and a multi-service platform; the optical cable has a number of optical fibres assigned for the transmission of data; at least one of the optical fibres is uniquely assigned for use as a provisioning data path; the destination identity is forwarded from the cross-connect to an Operations, Administration, Maintenance and Provisioning (OAM&P) subsystem; and the source identity is forwarded from the multi-service platform to the OAM&P subsystem over the uniquely assigned provisioning data path within the optical cable. "starting a process at a first entry;" in claim 6 has been deleted.

Amendments to claims 1, 5 and 6 are fully supported by the application as originally filed. Especially, support for the amendments can be found, for example, on page 5, lines 1-16 and Figures 2-3. No new matter has been introduced by way of the

amendment.

The Examiner objected to claims 1, 6, 10 and 12 because of the informalities.

In view of the Examiner's suggestions, Applicant has amended claims 1, 6, 10 and 12 as follows:

Claim 1, line 5: replacing "used" with "use";  
Claim 6, line 3: replacing "a cable" with "an optical cable";  
Claim 6, line 9: inserting "optical" before "cable";  
Claim 10; lines 1-2: replacing "wherein the last of said forwarding steps is followed by the step of" with "further comprising the step of";  
Claim 10, line 2: deleting "such as bit-rate and protocol";  
Claim 10, line 3: replacing "said cable" with "said optical cable";  
Claim 10, line 3: adding "after the forwarding steps" after "cable";  
Claim 12, line 1: replacing "wherein the last of said forwarding steps is followed by" with "further comprising";  
Claim 12, line 6: replacing "said cable or bundle" with "said optical cable";

Applicant has further amended claims 10 and 12 to replace "said operations, administration, maintenance and provisioning subsystem" with "said OAM&P subsystem".

Applicant has further amended claim 12 to delete "starting a process at a second entry" in line 2, and to add "without performing the forwarding steps" after "over said uniquely assigned path within said optical cable" in line 6.

Amendments to claims 1, 6, 10 and 12 are fully supported by the application as originally filed. Especially, support for amendments to claim 12 can be found on page 6, lines 6-19 and Figure 3. No new matter has been introduced by way of the amendments. Applicant respectfully requests the Examiner to withdraw the objections.

The Examiner rejected claims 1-3 and 6-8 under 35 U.S.C. 103(a) as being unpatentable over Admission (Figure 1 of Specification) in view of Shiragaki et al. (Optical Cross-Connect System Incorporated with Newly Developed Operation and Management System), hereinafter referred to as Shiragaki. The Examiner rejected

claims 4 and 9 under 35 U.S.C. 103(a) as being unpatentable over Admission in view of Shiragaki, and further in view of Ohihaber et al. (U.S. Patent No. 4,695, 127), hereinafter referred to Ohihaber. The Examiner rejected claims 5 and 10-13 under 35 U.S.C. 103(a) as being unpatentable over Admission in view of Shiragaki and further in view of Wang et al. (U.S. Patent Application Publication No. 2002/0041413), hereinafter referred to Wang.

The rejections are respectfully traversed for the reason as set out below.

Claim 1 is a system claim. Claim 6 is a method claim corresponding to claim 1. Claims 2-5 depend on claim 1. Claims 7-13 depend on claim 6.

Claim 1 is directed to a control messaging system which includes: an optical cable which is connected to a multi-service platform (MSP) at one end and is connected to a connector at the other end. The MSP has a first controller. The connector has a cross-connect and a second controller. Within the optical cable, a number of optical fibres are assigned for the transmission of data, and at least one of said optical fibres is assigned for use as a provisioning data path. An Operations, Administration, Maintenance and Provisioning (OAM&P) subsystem is connected to the provisioning data path through the connector. The first controller signals a source identity to the OAM&P subsystem over the provisioning data path. The second controller signals a destination identity to the OAM&P subsystem from the cross-connect.

Claim 6 is directed to a method of provisioning a system comprising the steps of: plugging in an optical cable to a connector having a cross-connect, and a multi-service platform; the optical cable has a number of optical fibres assigned for the transmission of data, and at least one of the optical fibres is uniquely assigned for use as a provisioning data path; forwarding the destination identity from the cross-connect to an Operations, Administration, Maintenance and Provisioning (OAM&P) subsystem; and forwarding the source identity from the multi-service platform to the OAM&P subsystem over the uniquely assigned provisioning data path.

According to the present invention, a provisioning data path is assigned within an optical cable connected to a connector having a cross-connect, and a multi-service platform. The destination identity is forwarded to an OAM&P subsystem from the cross-connect and the source identity is forwarded to the OAM&P subsystem from the

MSP over the provisioning data path. As described on page 2, lines 10-15, the OAM&P subsystem is responsible for managing the configuring and provisioning of the network and confirming both their correct configuration and ongoing correct operation. Thus, as described on page 3, lines 30-31, using the provisioning data path, errors on configuration and provisioning can quickly be identified and corrections can be quickly made.

Figure 1 of the present invention discloses multiplexing and interconnection elements in which the invention is practice. As the Examiner stated, Figure 1 does not disclose a provisional data path, or means (first and second controllers) for signaling source/destination identities to an OAM&P subsystem.

Shiragaki discloses an OAM information transport system (Figure 5). The system of Figure 5 has OXC nodes, an optical section, an optical splitter connected to one end of the optical section, and an optical line selector connected to the other end of the optical section. A transmitter Tx is provided to the optical splitter. A receiver Rx is provided to the optical selector. Shiragaki states on page 1183, the left col. that having a router for OAM signals provided in each OXC node makes it possible for an OAM signal (optical cross-connecting information and path identifiers etc.) to be routed toward a path terminated node, and the OAM information can thus reach any OXC nodes and can be altered at every OXC node. Shiragaki uses Tx (a transmitter) for transmitting OAM information and a receiver (Rx) for receiving the OAM information.

The Examiner stated that Shiragaki discloses, on Figure 5, an OAM&P subsystem connected to the provisioning data path at the cross connect, a means Tx to signal a source identity to the OAM&P subsystem over the provisioning data path, and a means Rx to signal a destination identity to the OAM&P subsystem from the cross connect. However, Tx of Shiragaki is a transmitter for transmitting OAM information from an OXC node to a next OXC node, and Rx of Shiragaki is a receiver for receiving the OAM information. In the present invention, a first controller signals a source identity to an OAM&P subsystem, and a second controller signals a destination identity to the OAM&P subsystem from a cross-connect. Thus, Tx and Rx of Shiragaki do not correspond to first and second controllers of the present invention.

Shiragaki is directed to hitless switching for the transportation of OAM information, and is not directed to provisioning a system using an OAM&P subsystem.

Shiragaki neither discloses nor suggests a first controller (located at a multi-service platform) signaling the source identity to an OAM&P subsystem over a provisioning data path within an optical cable; and a second controller (located at a connector) signaling the destination identity to the OAM&P subsystem as recited in claim 1. Shiragaki neither discloses nor suggests forwarding the source identity from a source identity to an OAM&P subsystem over a uniquely assigned provisioning data path within an optical path; and forwarding the destination identity from a cross-connect to the OAM&P subsystem as recited in claim 6.

Chalhaber discloses a hybrid coaxial-optical cable. Wang discloses a network in which reserved wavelength channels form an optical supervisory channel.

However, Chalhaber and Wang do not add any teaching to the combination of Figure 1 of the present invention and Shiragaki to render claims 1 and 6 unpatentable.

Hence, it is respectfully submitted that claims 1 and 6 and their dependent claims comply with U.S.C. 35 103(a) in view of the cited references. Applicant requests the Examiner to withdraw the rejections.

Applicant has replaced the title "Apparatus and Method for Control Messaging in an Optical Network" with new title "Controlling Messaging in an Optical Network".

Applicant has amended page 3 to add new paragraphs, which correspond to claims 1 and 6. No new matter has been introduced by way of the amendments to the specification.

Applicant has amended the paragraph of page 6, lines 6-15 as follows:

Page 6, line 7: deleting " (space) before ".

Page 6, line 7: adding "at step" before 301;

Page 6, line 9: adding "at step" before 305;

Page 6, line 10: replacing ":" with "at step 310.:";

Page 6, line 12: adding "at step 315" after "121";

Page 6, line 13: adding "at step" before 320;

Page 6, line 13: adding "at step" before 325;

Page 6, lines 14-15: deleting "355" and adding "at step 355" after "121".

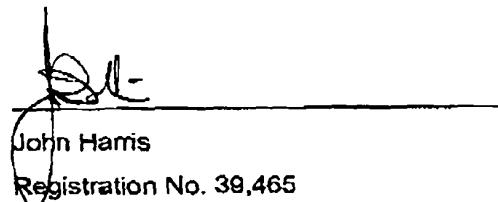
Applicant has amended the paragraph of page 6, lines 16-19 as follows:

Page 6, line 16: adding "at step" before "302";  
Page 6, line 17: adding "at step" before "350";  
Page 6, line 17: adding "exist," after "If it does not";  
Page 6, line 18: adding "at step" before "390";  
Page 6, line 19: adding "at step" before "355".

Support for the amendment to page 6 can be found on Figure 3. No new matter has been introduced by way of the amendment.

In view of the above amendments and remarks, and having dealt with all of the matters raised by the Examiner, early reconsideration and allowance of the application is respectfully requested.

Respectfully Submitted,



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